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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/556,459

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David J. Chatting

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08/31/2009

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EXAMINER

ENTEZARI, MICHELLE M

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

08/31/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/556,459	Applicant(s) CHATTING ET AL.	
	Examiner MICHELLE ENTEZARI	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-7,9,10,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-7,9,10,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 15, 2009 has been entered.

Response to Amendment

2. Claims 1, 2, 5-7, 9, 10, and 13-14 are pending, claims 1 and 9 have been amended, claims 3, 14, 11 and 12 are canceled.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 2, 5-7, 9, 10, and 13-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 2, 5-7, 9, 10, 13, and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shum et al. (US 20030095701 A1) in view of Blanz et al. (US 6556196 B1).

Regarding claims 1 and 9, Shum et al. disclose a method and system of generating a caricatured image (facial sketch generation, [0002]), said method comprising: storing a reference image having predefined feature areas (labeling a set of feature points corresponding to facial features depicted in training images, [0062]), each said feature area of the reference image encompassing a predetermined individually recognizable component of the reference image (face features and associated points include eyebrow, nose, eyelid, [0063]); receiving an input image to be caricatured (locate facial feature points in an input image, [0079]); identifying a plurality of points within the input image (locate facial feature points in an input image, [0079]); identifying plural feature areas on the input image, corresponding to the predefined feature areas on the reference image (ASM module applied to extract feature points from the input image,

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[0015]; facial feature points labeled in training image to locate feature points in an input image, [0079]), all such corresponding feature areas encompassing the same individually recognizable component of the reference image (labeling a set of feature points corresponding to facial features depicted in training images, [0062]), determining in which of the identified feature areas each of the plurality of points lie, independently applying respectively associated caricaturing transformations to each point located within the identified respectively associated feature areas in the input image so as to generate a caricatured image comprising a composite of the transformed points located in said feature areas (create a vector from feature points, warp or transform input image, [0081]); and wherein the applying step comprises calculating, for each point, the position that said each point should take within a corresponding caricatured imager feature area as a function of the relative dimensions of (a) the determined feature area within the input image to (b) the respectively corresponding feature area in the reference image (save point locations, [0011]; mean shape vector used to define a set of transform functions, reassign pixel locations in training images and sketches, [0012]; input image scaled and cropped to match training images, [0081]).

Predefined feature areas are not well defined in Shum et al. Additionally, the independence of the transformations is not well defined.

Blanz et al. teach predefined feature areas (col. 6, lines 30-35), and teach independent transformations of subregions (col. 6, lines 30-35).

It would have been obvious at the time of the invention to one of ordinary skill in the art to combine the invention of Blanz et al. with the invention of Shum et al., as this allows for more selective accenting of various regions for a more dramatic effect.

Regarding claims 2 and 10, Shum et al. and Blanz et al. disclose the invention of claims 1 and 9. Shum et al. additionally disclose caricaturing transformations comprise at least one of a scaling transformation and/or a translation transformation ([0081]).

Regarding claims 5 and 13, Shum et al. and Blanz et al. disclose the invention of claims 1 and 9. Blanz et al. further teach determining a caricature level parameter (coefficients multiplied by a constant factor, col. 7, lines 45-50) defining the amount of caricaturing to be applied to the input image in dependence on the intended size of the caricature image to be generated (increase distance from the average face, shape coefficient multiplied by a constant factor col. 7, lines 40-50; “weight” transformation, and the “fullness of face” description, col. 7, lines 50-10 and fig. 3); and inputting said determined caricature level parameter to the transformation processes (coefficients multiplied by a constant factor, col. 7, lines 45-50), thereby applying the caricaturing transformations in dependence on the caricature level.

Regarding claims 6 and 14, Shum et al. and Blanz et al. disclose the invention of claims 1 and 9. Shum et al. additionally disclose the face is a human face (Fig. 3A, Fig.

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6), and Blanz et al. further teach an image of a human face (figs 1-7), the identified feature areas each containing a particular human facial feature as said image component encompassed therein (subregions include eyes, nose, mouth, and surrounding region, col. 6, lines 30-35).

Regarding claim 7, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the method of claim 1 using software.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Kim et al. (US 20030206171 A1)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELLE ENTEZARI whose telephone number is (571)270-5084. The examiner can normally be reached on M-Th, 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571)272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michelle Entezari/
Examiner, Art Unit 2624

/VIKKRAM BALI/
Supervisory Patent Examiner, Art Unit 2624